

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method in a terminal device, comprising:
 - a) establishing a first wireless ~~low power, low data rate~~ communication link including control information with another device;
 - b) establishing a second higher data rate wireless communication link with the another device; and
 - c) controlling communication of the second higher data rate wireless communication link,
wherein the first ~~low power, low data rate~~ wireless communication link frees the second higher data rate wireless communication link from link control overhead by using the first wireless communication link as a control channel for the second wireless communication link.
2. (Currently Amended) The method of claim 1 wherein the second higher data rate wireless communication link is established based on information communicated via the first wireless ~~low power, low data rate~~ communication link.
3. (Previously Presented) A method, comprising:
 - a) attaching to a mobile device a removable memory module including integrated memories and an ultra-wideband (UWB) transceiver;
 - b) establishing a wireless low power communication link using link manager protocol data for exchanging UWB parameters between the mobile device and a base device having base integrated memories and a base UWB transceiver;
 - c) initiating an ultra wideband transmission between the mobile device and the base device based on the exchanged UWB parameters;
 - d) wherein no link manager protocol data is transmitted in the ultra wideband transmission and there is no change in the direction of a data transfer flow of a receiver side eliminating sending acknowledgements to a transmitter side.

4. (Previously Presented) The method of claim 3, further comprising:
 - e) transmitting data from the base device to the removable memory module via the ultra wideband transmission link for storage in the integrated memories of the removable memory module;
 - f) forwarding the transmitted data from the removable memory module to the mobile device memories through a connector and a bus interface; and
 - g) processing the transmitted data in the mobile device.
5. (Previously Presented) The method of claim 4 further comprising:
 - h) requesting an acknowledgement from the mobile device via the low power communication connection before each sequential ultra wideband transmission.
6. (Previously Presented) The method of claim 5 further comprising:
 - i) performing pulse repetition rate and PN code modulation of a UWB transceiver to transmit data.
7. (Previously Presented) The method of claim 6 further comprising:
 - j) storing transmitted data in the integrated memory of the receiving device.
8. (Previously Presented) The method of claim 7 further comprising:
 - k) performing precalculated heavy error coding of the transmitted data prior to transmitting said data.
9. (Previously Presented) The method of claim 8 further comprising:
 - l) performing simple parity checking of received transmitted data.
10. (Previously Presented) A method, comprising:
 - a) attaching to a mobile device a removable memory module including an integrated memory and ultra wideband (UWB) transmitter and receiver which captures UWB transmitted data up to 1 Gbit/second;
 - b) establishing a base device including an integrated memory and a base UWB transmitter and receiver;
 - c) initiating a low power communication connection including control information between the mobile device and the base device;

- d) exchanging UWB parameters between the devices via the low power communication connection freeing the UWB transmitter from link control overhead by using the low power connection as a control channel for the base device;
- e) activating the mobile device UWB transmitter for transmitting data as modulated pulse trains to the base device receiver;
- f) demodulating the mobile device UWB transmitter pulse trains in the base device UWB receiver;
- g) transmitting from the base device UWB transmitter to the mobile device UWB receiver, modulated pulse trains of the base device UWB transmitter interleaved between the modulated pulse trains of the mobile device UWB transmitter; and
- h) demodulating the modulated pulse trains of the base device UWB transmitter in the mobile device UWB receiver.

11. (Original) The method of claim 10 wherein the low power communication connection is a Bluetooth connection.

12. (Original) The method of claim 11 wherein the integrated memories comprise a high-speed memory with direct memory access.

13. (Previously Presented) The method of claim 12 wherein the base device is another mobile device attached with a removable memory module.

14. (Currently Amended) Apparatus comprising:
- a) means for establishing a first ~~low power, low data rate~~ radio link including control information between first and second terminals;
 - b) means for establishing a second ~~significantly faster~~ higher data rate radio link between the terminals for data throughput; and
 - c) means for controlling communications of the second ~~faster~~ higher data rate radio link via the first ~~low power, low data rate~~ radio link wherein the first ~~low power, low data rate~~ radio link frees the second ~~faster~~ higher data rate radio link from link control overhead by using the first low power, low data rate radio link as a control channel for the second higher data rate radio link.

15. (Previously Presented) The apparatus of claim 14 wherein the second higher data rate radio link serves as a direct data channel for actual data payload.

16. (Previously Presented) The apparatus of claim 14 wherein there is no change in the direction of the flow to a receiver side eliminating sending acknowledgements to a transmitter side.

17. (Previously Presented) The apparatus of claim 16 wherein the direct data channel eliminates time-consuming adjustments due to transceiver/receiver switching where possible loss of data occurs.

18. (Previously Presented) The apparatus of claim 14 further comprising:
d) means including a high capacity memory and an ultra wide band (UWB) transceiver attached to a terminal for capture of data at high speed and transfer to a utilization device at lower speeds.

19. (Previously Presented) Apparatus, comprising:
a) a first control circuitry;
b) a first memory;
c) low power communications means for communicating over a wireless low power communication link;
d) data bus circuitry interconnecting a first processor, the first memory and the wireless low power communication link; and
e) a detachable memory unit connectable to the data bus circuitry through a connector interface, comprising:
i) a second control circuitry;
ii) an ultra wide band (UWB) receiver for receiving data over a UWB communication link;
iii) a second memory for temporarily storing the received data, and
iv) a circuit means connecting a second processor, the UWB receiver and the second memory together and to the data bus circuitry through the connector interface,
wherein the wireless low power communication link controls the UWB communication link to keep data receiving rate of the UWB communication link optimized by freeing the UWB

communication link from link control overhead by using the wireless low power communication link as a control channel for the UWB communication link.

20. (Previously Presented) The apparatus of claim 19 further comprising:
f) a UWB transmitter connected to the circuit means for transferring data over the UWB communication link.

21. (Previously Presented) The apparatus of claim 19 further comprising:
g) display means connected to the first control circuitry.

22. (Previously Presented) The apparatus of claim 19 wherein the low power communication means is taken from the group consisting of Bluetooth, IrDa, HIPERLAN, WLAN, ZigBee, IEEE 802.11x, and IEEE 802.15.

23-27. (Canceled)

28. (Currently Amended) Apparatus, comprising:
a processor;
a first wireless transceiver module coupled with the processor for establishing a first ~~low power, low data rate~~ radio link including control information with another device; and
a second wireless transceiver module coupled with the processor for establishing a second higher data rate radio link with the another device;
wherein the processor is configured to control the operation of the first and second wireless transceiver modules so that the first radio link controls the second higher data rate radio link freeing the second higher data rate radio link from link control overhead by using the first ~~low power, low data rate~~ radio link as a control channel for the second higher data rate radio link.

29. (Previously Presented) The apparatus of claim 29, wherein the processor is further configured to control the operation of the first and second wireless transceiver modules so that the second higher data rate radio link is established based on information communicated via the first low-power radio link.

30. (Original) A method in a device, comprising:
establishing a first wireless communication link including control information with
another device;

establishing a second wireless communication link with the another device as a
direct channel; wherein the second communication link is an ultra-wideband communication
link, and

controlling communication of the second wireless communication link by using
the first wireless communication link as a control channel for the second wireless
communication link, whereby the first low power wireless communication link frees the second
wireless communication link from link control over head for direct data transmission by using
the first wireless communication link as a control channel for the second wireless
communication link.